

## Transformers for Plant Rooms and Workshops

Developed to provide a safe working voltage for users of portable power tools and temporary lighting on construction sites, 110V Reduced Low Voltage has been widely adopted by other industries as a means of increasing safety for users of portable equipment in fabrication shops, plant rooms, railway repair sheds, craft workshops and many other locations. In these permanent installations, transformers and socket outlets are fixed in position and installations have to comply with all elements of BS7671, the IET Wiring Regulations.

Blakley Electrics offers a range of fixed 110V transformer solutions, which are outlined below. Part numbers and other details are provided on pages 2, 3 and 4 of this data sheet.

### Eco-Tx series for Zero Off-load Losses

To eliminate consumption and emissions when a transformer is not in use, Eco-Tx transformers are configured so that the winding can only be energised when a plug is inserted into a 110V socket. Only then can the switch on the 110V socket be rotated to the ON position, which simultaneously energises the transformer core and provides 110V to the socket. To unplug from the socket, rotate the switch to the OFF position and withdraw the plug. Removal of the last plug from the assembly guarantees that the transformer is de-energised (some Eco-Tx assemblies have one socket and some have two sockets). Save energy and eliminate unnecessary emissions with Eco-Tx plant room transformers. Refer to data sheet TRDS022 for details.



### Transformers with Integral Sockets

Wall mounting transformer assemblies, single-phase, in continuous ratings of 1, 2 and 3 kVA, fitted with 16A or 32A, 2P+E, 110V sockets to BS EN 60309-2. Transformers incorporate double-pole (DP) fuse or MCB protection. Refer to data sheet TRDS011 for details.

### Transformers with Integral Double-pole MCB Distribution

Combined transformer and DP MCB distribution assemblies, rated from 2kVA to 10kVA, with integral DP MCB distribution arrangement to feed remote sockets. Space for up to 22 no. DP MCBs or RCBOs dependent on transformer rating. Offered in wall mounting and floor standing formats. Refer to data sheet TRDS010 for details.



### Wall Mounting Transformers to Supply Separate MCB Boards

Available in standard ratings of 2 kVA, 5 kVA and 10 kVA, single-phase. Transformers incorporate MCB or MCB/RCD protection on the secondary and feed separate DP MCB Distribution Boards (see page 4 for details). Refer to data sheet TRDS021 for details.

### Multi Voltage SP Assemblies with 110V & 230V Outlets

SP Single Point distribution assemblies provide a source of 110V and 230V power, fed from a single supply. Assemblies are fully wired and fitted with a main switch, as well as MCB and RCD protection and integral transformer. Versions are also available with SELV outlets rated at 25V. Refer to data sheet TRDS021 for details.





## Eco-Tx Transformers for Zero Off-load Losses

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Part No.	Type	Rating	Distribution
S210382	Eco-Tx/1/C1/Si1-16/IP44	1 kVA	1 x 10A DP MCB feeding a 16A 3P 110V socket
S210383	Eco-Tx/1/C1-RCD/Si1-16/IP44	1 kVA	1 x 10A DP MCB / RCD feeding a 16A 3P 110V socket
S210384	Eco-Tx/2/C1/Si1-16/IP44	2 kVA	1 x 16A DP MCB feeding a 16A 3P 110V socket
S210385	Eco-Tx/2/C1-RCD/Si1-16/IP44	2 kVA	1 x 16A DP MCB / RCD feeding a 16A 3P 110V socket
S210386	Eco-Tx/2/C1/S2-16/IP44	2 kVA	1 x 16A DP MCB feeding 2 x 16A 3P 110V sockets
S210387	Eco-Tx/2/C1-RCD/S2-16/IP44	2 kVA	1 x 16A DP MCB / RCD feeding 2 x 16A 3P 110V sockets



## Transformers with Integral Sockets, IP44

Wall mounting transformer assemblies, single-phase, in continuous ratings of 1, 2 and 3 kVA, fitted with 16A or 32A, 2P+E, 110V sockets to BS EN 60309-2. Transformers incorporate double-pole (DP) fuse or MCB protection. Refer to data sheet TRDS011 for details.

Part No.	Type	Rating	Distribution
S210127	TLW/1/F/S1/IP44	1 kVA	1 x set of 10A DP fusing feeding a 16A 3P 110V socket
S210126	TLW/2/F/S2/IP44	2 kVA	1 x set of 16A DP fusing feeding 2 x 16A 3P 110V sockets
S210332	TLW/1/2/C1/S2/IP44	2 kVA	1 x 16A DP MCB feeding 2 x 16A 3P 110V sockets. Also fitted a mains isolator.
S210128	TSW/3/F/S2/IP44	3 kVA	2 x sets of 16A DP fusing each feeding a 16A 3P 110V socket
S210133	TSW/3/F/S1/IP44	3 kVA	1 x set of 32A DP fusing feeding a 32A 3P 110V socket



## Multi Voltage SP Assemblies

SP Single Point distribution assemblies provide a source of 110V and 230V power, fed from a single supply. Assemblies are fully wired and fitted with a main switch, as well as MCB and RCD protection and integral transformer. Versions are also available with SELV outlets rated at 25V.

Refer to data sheet DDS008 for details.

Part No.	Type	Rating	IP	Distribution
S260170	SPDA20-2/LI-LO/I32/1N/RCCB-A/C2/Tx2/S4/IP20	2 kVA	IP20	Twin 13A 230V sockets and 2 x 16A 110V
S260171	SPDA20-3/LI-LO/I32/1N/RCCB-A/C3/Tx2/S5/IP20	2 kVA	IP20	Twin 13A 230V sockets, 2 x 16A 110V and 1 x 16A 24V
S210336	SPDA44-1/I32/1N/RCD/C3/Tx1/S2/IP44	1 kVA	IP44	1 x 16A 230V socket and 1 x 16A 110V
S210337	SPDA44-2/I32/1N/RCCB/C3/Tx2/S3/IP44	2 kVA	IP44	1 x 16A 230V socket and 2 x 16A 110V
S260172	SPDA55-2/LI-LO/I32/1N/RCCB-A/C2/Tx2/S4/IP55	2 kVA	IP55	2 x 13A 230V sockets and 2 x 16A 110V
S260173	SPDA55-3/LI-LO/I32/1N/RCD-A/C3/Tx2/S5/IP55	2 kVA	IP55	2 x 13A 230V sockets, 2 x 16A 110V and 1 x 16A 24V

All items incorporate a 32A DP mains switch. 230V sockets are RCD protected and 16A sockets are MCB protected. Refer to data sheet DDS008 for full details.



## Transformers to Supply Separate DP Distribution Boards

Available in standard ratings of 2 kVA, 5 kVA and 10 kVA, single-phase, with ingress ratings of IP44 or IP55. Transformers incorporate MCB or MCB/RCD protection on the secondary and are intended to supply separate DP MCB Distribution Boards (see page 4 for details). Refer to data sheet TRDS011 and TRDS021 for details.

Part No.	Type	Rating	Ingress	Distribution
S210264	TLW/2/C1/IP44	2 kVA, single-phase	IP44	1 no. 16A double-pole MCB
S210380	TLW/2/C1/RCD300/IP44	2 kVA, single-phase	IP44	1 no. 16A double-pole MCB + 300mA 110V RCCB
S210381	TLW/2/C1/RCD300S/IP44	2 kVA, single-phase	IP44	1 no. 16A double-pole MCB + 300mA 110V Selective RCCB
S210362	TH/1/2/C1/IP55	2 kVA, single-phase	IP55	1 no. 16A double-pole MCB
S210365	TH/1/2/C1/RCD300/IP55	2 kVA, single-phase	IP55	1 no. 16A double-pole MCB + 300mA 110V RCCB
S210368	TH/1/2/C1/RCD300S/IP55	2 kVA, single-phase	IP55	1 no. 16A double-pole MCB + 300mA 110V Selective RCCB
S210363	TH/1/5/C1/IP55	5 kVA, single-phase	IP55	1 no. 50A double-pole MCB
S210366	TH/1/5/C1/RCD300/IP55	5 kVA, single-phase	IP55	1 no. 50A double-pole MCB + 300mA 110V RCCB
S210369	TH/1/5/C1/RCD300S/IP55	5 kVA, single-phase	IP55	1 no. 50A double-pole MCB + 300mA 110V Selective RCCB
S210364	TH/1/10C1/IP55	10 kVA, single-phase	IP55	1 no. 80A double-pole MCB
S210367	TH/1/10C1/RCD300/IP55	10 kVA, single-phase	IP55	1 no. 80A double-pole MCB + 300mA 110V RCCB
S210370	TH/1/10C1/RCD300S/IP55	10 kVA, single-phase	IP55	1 no. 80A double-pole MCB + 300mA 110V Selective RCCB

Please see page 4 for details of 110V DP MCB boards and 16A and 32A socket outlets, with and without RCD protection



## Transformer Distribution Cubicles

TDC series of combined transformer and DP MCB distribution assemblies, rated from 2kVA to 10kVA, with integral DP MCB distribution arrangement to feed remote sockets. Space for up to 22 no. DP MCBs or RCBOs dependent on transformer rating. Offered in wall mounting and floor standing formats. Refer to data sheet TRDS010 for details.

Part No.	Type	Rating	Ingress	Distribution
Wall mounting, vented to IP23, bottom cable entry and exit				
S210033	TDC/2/RCD300/C4-16/WM	2 kVA	IP23	300mA DP 110V RCCB feeding 4 no. 16A DP MCBs
S210035	TDC/5/RCD300/C10-16/WM	5 kVA	IP23	300mA DP 110V RCCB feeding 10 no. 16A DP MCBs
S210310	TDC/10/RCD300/C16-16/WM	10 kVA	IP23	300mA DP 110V RCCB feeding 16 no. 16A DP MCBs
Floor standing, non-vented to IP55, top cable entry and exit				
S210321	TDC/5/RCD300/C6-16/FS	5 kVA	IP55	300mA DP 110V RCCB feeding 6 no. 16A DP MCBs
S210322	TDC/5/RCD300/C10-16/FS	5 kVA	IP55	300mA DP 110V RCCB feeding 10 no. 16A DP MCBs
S210323	TDC/5/RCD300/C14-16/FS	5 kVA	IP55	300mA DP 110V RCCB feeding 14 no. 16A DP MCBs

Fitted with a "D" type MCB on primary and "C" type MCBs on the secondary.

The 110V output from all of the transformers listed above is defined in BS7671:2018 as Reduced Low Voltage (RLV). The secondary windings of the transformers are centre-tapped to earth (55.0.55) requiring overcurrent protection to be double-pole (including any RCBOs). Where RCD protection is incorporated on 110V circuits, the devices are specifically designed for 110V operation, in accordance with the requirements of BS EN 61008. Please note: RCD protection may be required to achieve a disconnection time of 5 seconds on hard wired 110V circuits.

In addition to the standard transformers listed above, we also design and manufacture non-standard transformer assemblies to meet specific installation requirements, which could include: special transformer ratings; enclosures made from stainless steel or GRP; non-standard socket arrangements, etc.

## Equipped MCB Boards, IP55, DP, 110V

A cost effective range of heavy duty MCB distribution boards equipped with DP MCBs or RCBOs, designed to distribute a 110V Reduced Low Voltage supply.

### Enclosures

Fabricated from heavy gauges of sheet steel with a high quality paint finish. The enclosure design has been independently type tested to prove compliance with the IP55 rating. Enclosures feature side hinged key lockable and padlockable doors, top and bottom removable gland plates, external wall fixings, etc.

### Switchgear

All standard 110V boards feature 100A DP incoming switches, which are capable of terminating conductors with a cross section of up to 50mm<sup>2</sup>. On the outgoing, we offer a choice of 6, 8 or 10 no. 16A Type "C" DP Schneider MCBs or 16A Type "C" 110V DP ABB RCBOs with a sensitivity of 30mA. A spare DP way is provided in each board, which can accept a DP MCB or RCBO rated up to 32A. Both types of outgoing device can terminate conductors with a cross section of up to 25mm<sup>2</sup>. Standard order references are detailed below.

A range of standard accessories is also available, including metering modules, rain canopies and extension chambers.

### Order References

Part No.	Type No.	Distribution
S040392	DB551/1100-2P/7W/C6-16/110V	6 no. 16A DP Type "C" MCBs
S040395	DB551/1100-2P/7W/RCBO6-16/110V	6 no. 16A DP Type "C" RCBOs
S040393	DB552/1100-2P/9W/C8-16/110V	8 no. 16A DP Type "C" MCBs
S040396	DB552/1100-2P/9W/RCBO8-16/110V	8 no. 16A DP Type "C" RCBOs
S040394	DB553/1100-2P/11W/C10-16/110V	10 no. 16A DP Type "C" MCBs
S040397	DB553/1100-2P/11W/RCBO10-16/110V	10 no. 16A DP Type "C" RCBOs

MCB boards with different configurations can be supplied to order.

## Sockets for 110V Installations

To complement our range of 110V Transformers and DP MCB boards, we offer 110V surface sockets to BSEN 60309-2, rated at 16A and 32A, with ingress protection to IP44 or IP66/67. Sockets are available with and without RCD protection.

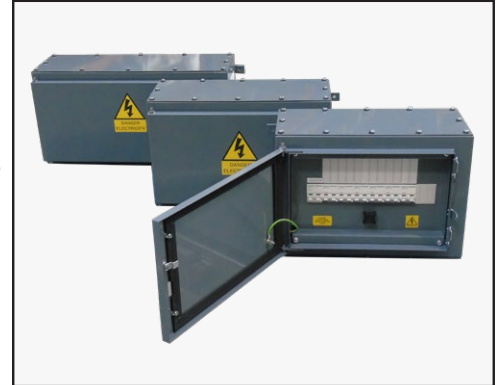
Please contact us for details of 110V sockets with the addition of DP MCB protection, which are required when the overcurrent rating of the protective device supplying the socket circuit exceeds the rating of the socket i.e. when a 32A MCB feeds a circuit of 16A sockets.

### Order References

Part No.	Type No.	Description
S190392	ERC/1/16/110V	Surface Socket, 16A, 110V, 2P+E, IP44 c/w RCD
S190393	ERC/1/32/110V	Surface Socket, 32A, 110V, 2P+E, IP44 c/w RCD
S190394	ERC/1/16/110/WT	Surface Socket, 16A, 110V, 2P+E, IP66 c/w RCD
S190395	ERC/1/32/110/WT	Surface Socket, 32A, 110V, 2P+E, IP66 c/w RCD
S201071	B513.1650T	Surface Socket, 16A, 110V, 2P+E, IP44
S201082	B513.3250T	Surface Socket, 32A, 110V, 2P+E, IP44
S201182	B518.1650T	Surface Socket, 16A, 110V, 2P+E, IP67
S201183	B518.3250T	Surface Socket, 32A, 110V, 2P+E, IP67



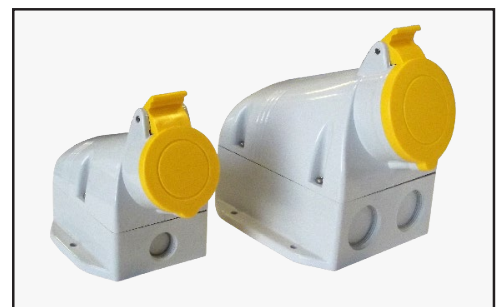
Part S040392, MCB Board, 110V, fitted with a 100A incoming isolator and 6 no. 16A DP Type "C" MCBs



MCB Boards fitted with 6, 8 or 10 no. 16A DP Type "C" MCBs or RCBOs



16A and 32A, 110V, 2P+E, IP44, Surface Sockets with 30mA RCD protection



16A and 32A, 110V, 2P+E, IP44, Surface Sockets